

(iii) Flexible: 13H1, 13H2, 13H3, 13H4, 13H5, 13L1, 13L2, 13L3, 13L4, or 13M2;

(iv) Metal: 11A, 11B, 11N, 21A, 21B, 21N, 31A, 31B, or 31N;

(v) Rigid plastic: 11H1, 11H2, 21H1, 21H2, 31H1, or 31H2; or

(vi) Wooden intermediate bulk containers: 11C, 11D, or 11F.

(2) The following conditions and limitations apply to the use of intermediate bulk containers:

(i) Flexible, fiberboard and wooden intermediate bulk containers are intended for the transport of solids only and may not be used for liquids or materials that may become liquid during transportation; or

(ii) Flexible, fiberboard, or wooden intermediate bulk containers containing materials in Packing Group II must be packed in a closed freight container or a closed transport vehicle.

[Amdt. 173-224, 55 FR 52663, Dec. 21, 1990, as amended at 56 FR 66274, Dec. 20, 1991; Amdt. 173-238, 59 FR 38067, July 26, 1994; Amdt. 173-252, 61 FR 28676, June 5, 1996]

§ 173.241 Bulk packagings for certain low hazard liquid and solid materials.

When § 172.101 of this subchapter specifies that a hazardous material be packaged under this section, only the following bulk packagings are authorized, subject to the requirements of subparts A and B of part 173 of this subchapter and the special provisions specified in column 7 of the § 172.101 table.

(a) *Rail cars*: Class DOT 103, 104, 105, 109, 111, 112, 114, 115, or 120 tank car tanks; Class 106 or 110 multi-unit tank car tanks and AAR Class 203W, 206W, and 211W tank car tanks.

(b) *Cargo tanks*: DOT specification MC 300, MC 301, MC 302, MC 303, MC 304, MC 305, MC 306, MC 307, MC 310, MC 311, MC 312, MC 330, MC 331, DOT 406, DOT 407, and DOT 412 cargo tank motor vehicles; and non-DOT specification cargo tank motor vehicles suitable for transport of liquids.

(c) *Portable tanks*: DOT 51, 52, 56, 57 and 60 portable tanks; IMO type 1, 2 and 5, and IM 101 and IM 102 portable tanks; marine portable tanks conforming to 46 CFR part 64; and non-DOT specification portable tanks suitable for transport of liquids.

(d) *Intermediate bulk containers*. (1) Intermediate bulk containers are authorized subject to the conditions and limitations of this paragraph and paragraph (d)(2) of this section provided they conform to the requirements in subpart O of part 178 of this subchapter at the Packing Group performance level specified in column 5 of the § 172.101 table of this subchapter for the material being transported.

(i) The following are authorized for liquids or solids:

(A) Composite: 31HZ1 or 31HZ2; For each composite intermediate bulk container, the letter “Z” must be replaced with a capital letter which indicates the material of construction of the outer packaging. For example, 31HA1 is a composite intermediate bulk container with a metal outer packaging (see § 178.702 of this subchapter);

(B) Metal: 31A, 31B, or 31N; or

(C) Rigid plastic: 31H1 or 31H2.

(ii) The following are authorized for solids only:

(A) Composite: 11HZ1, 11HZ2, 21HZ1, or 21HZ2. For each composite intermediate bulk container, the letter “Z” must be replaced with a capital letter which indicates the material of construction of the outer packaging. For example, 21HA1 is a composite intermediate bulk container with a metal outer packaging (see § 178.702 of this subchapter);

(B) Fiberboard: 11G;

(C) Flexible: 13H1, 13H2, 13H3, 13H4, 13H5, 13L1, 13L2, 13L3, 13L4, or 13M2;

(D) Metal: 11A, 11B, 11N, 21A, 21B, or 21N;

(E) Rigid plastic: 11H1, 11H2, 21H1, or 21H2; or

(F) Wooden: 11C, 11D, or 11F.

(2) The following conditions and limitations apply to the use of intermediate bulk containers:

(i) Flexible, fiberboard and wooden intermediate bulk containers are intended for the transport of solids only and may not be used for liquids or materials that may become liquid during transportation;

(ii) Only liquids with a vapor pressure less than or equal to 110 kPa (16 psig) at 50 °C (122 °F), or 130 kPa (18.9 psig) at 55 °C (131 °F), are authorized in metal intermediate bulk containers; or

(iii) Flexible, fiberboard, or wooden intermediate bulk containers containing materials in Packing Group II must be packed in a closed freight container or a closed transport vehicle.

[Amdt. 173-224, 55 FR 52663, Dec. 21, 1990, as amended at 56 FR 66275, Dec. 20, 1991; Amdt. 173-238, 59 FR 38067, July 26, 1994; Amdt. 173-252, 61 FR 28676, June 5, 1996]

§ 173.242 Bulk packagings for certain medium hazard liquids and solids, including solids with dual hazards.

When § 172.101 of this subchapter specifies that a hazardous material be packaged under this section, only the following bulk packagings are authorized, subject to the requirements of subparts A and B of part 173 of this subchapter and the special provisions specified in column 7 of the § 172.101 table.

(a) *Rail cars*: Class DOT 103, 104, 105, 109, 111, 112, 114, 115, or 120 tank car tanks; Class 106 or 110 multi-unit tank car tanks and AAR Class 206W tank car tanks.

(b) *Cargo tanks*: Specification MC 300, MC 301, MC 302, MC 303, MC 304, MC 305, MC 306, MC 307, MC 310, MC 311, MC 312, MC 330, MC 331, DOT 406, DOT 407, and DOT 412 cargo tank motor vehicles. Cargo tanks used to transport Class 3, Packing Group I or II, or Packing Group III with a flash point of less than 38 °C (100 °F); Class 6, Packing Group I or II; and Class 8, Packing Group I or II materials must conform to the following special requirements:

(1) Pressure relief system: Except as provided by § 173.33(d), each cargo tank must be equipped with a pressure relief system meeting the requirements of § 178.346-3 or § 178.347-4 of this subchapter. However, pressure relief devices on MC 310, MC 311 and MC 312 cargo tanks must meet the requirements for a Specification MC 307 cargo tank (except for Class 8, Packing Group I and II). Pressure relief devices on MC 330 and MC 331 cargo tanks must meet the requirement in § 178.337-9 of this subchapter.

(2) Bottom outlets: DOT 406, DOT 407 and DOT 412 must be equipped with stop-valves meeting the requirements of § 178.345-11 of this subchapter; MC 304, MC 307, MC 310, MC 311, and MC 312 cargo tanks must be equipped with stop-valves capable of being remotely

closed within 30 seconds of actuation by manual or mechanic means and (except for Class 8, Packing Group I and II) by a closure activated at a temperature not over 121 °C (250 °F); MC 330 and MC 331 cargo tanks must be equipped with internal self-closing stop-valves meeting the requirements in § 178.337-11 of this subchapter.

(c) *Portable tanks*: DOT 51, 52, 53, 56, 57 and 60 portable tanks; and marine portable tanks conforming to 46 CFR part 64. DOT 57 portable tanks used for the transportation by vessel of Class 3, Packing Group II, materials must conform to the following:

(1) Each tank must have a minimum design pressure of 62 kPa (9 psig) and be equipped in accordance with § 178.253-4 of this subchapter, except that frangible devices are not authorized; and

(2) No pressure relief device may open at less than 34.4 kPa (5 psig).

(d) *Intermediate bulk containers*. (1) Intermediate bulk containers are authorized subject to the conditions and limitations of this paragraph and paragraph (d)(2) of this section provided they conform to the requirements in subpart O of part 178 of this subchapter at the Packing Group performance level specified in column 5 of the § 172.101 table of this subchapter for the material being transported.

(i) The following are authorized for liquids or solids:

(A) Composite intermediate bulk containers: 31HZ1 or 31HZ2; for each composite intermediate bulk container, the letter "Z" must be replaced with a capital letter which indicates the material of construction of the outer packaging. For example, 21HA1 is a composite intermediate bulk container with a metal outer packaging (see § 178.702 of this subchapter);

(B) Metal: 31A, 31B, or 31N; or

(C) Rigid plastic: 31H1 or 31H2;

(ii) The following are authorized for solids only:

(A) Composite: 11HZ1, 11HZ2, 21HZ1, or 21HZ2. For each composite intermediate bulk container, the letter "Z" must be replaced with a capital letter which indicates the material of construction of the outer packaging. For example, 21HA1 is a composite intermediate bulk container with a metal